PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference			eference	FOR FURTHER ACTION		See Form PCT/IPEA/416		
P21173WO								
International application No.				International filing date	(day/month/year)	Priority date (day/month/year) 07.11.2003		
	PCT/EP2004/052828			05.11.2004		07.11.2003		
	ional Pa D5/5		cation (IPC) or nati	ional classification and IPG	C			
Applica ALU		AL OBE	RFLÄCHEN'	TECHNIK GMBH	& CO. KG			
1.	1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.							
2.	This R	REPORT co	nsists of a total of	7	sheets, including	g this cover sheet.		
3.	This re	eport is also	accompanied by A	NNEXES, comprising:				
	a.	(sent to	o the applicant and	to the International Bured	au) a total of 3	sheets, as follows:		
	sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).							
	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.							
	ь. Г	_		Rureau only) a total of (in	dicate type and numbe	or of electronic carrier(e))		
	b (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))							
	, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see							
		Section 8	802 of the Administ	trative Instructions).				
4.	This re	eport contain	ns indications relati	ng to the following items:				
	\boxtimes	Box No. I	Basis of the	report				
		Box No. I	I Priority					
		Box No. I	II Non-establi	shment of opinion with re	gard to novelty, invent	ive step and industrial applicability		
	Box No. IV Lack of unity of invention							
	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					lty, inventive step or industrial applicability;		
		Box No. V	/I Certain doc	uments cited				
	Box No. VII Certain defects in the international application							
	Box No. VIII Certain observations on the international application							
Date of	submiss	sion of the de	emand	D	ate of completion of th	is report		
					1			
Name and mailing address of the IPEA/EP			A	Authorized officer				
Facsimile No.			Te	Telephone No.				

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Box	No. I	Basis of the report		
1.		h regard to the language, this report is based on the internationated under this item.	onal application in the language in	which it was filed, unless otherwise
		This report is based on translations from the original langum which is the language of a translation furnished for the pure international search (Rule 12.3 and 23.1(b)) publication of the international application (Rule 12.4)	poses of: 4)	·
2.	rece	international preliminary examination (Rule 55.2 and hargard to the elements of the international application, this eiving Office in response to an invitation under Article 14 a report): the international application as originally filed/furnished the description:	s report is based on (replacement :	
				as originally filed/furnished
		pages*		_
		pages*	_ received by this Authority on	
		the claims:		as originally filed/furnished
		nos.*	as amended (togethe	r with any statement) under Article 19
		nos.* _ 1-15	received by this Authority on	16.03.2006 with letter of 14.03.2006
		nos.*	received by this Authority on	
		the drawings: sheets		as originally filed/furnished
		sheets*	received by this Authority on	
		sheets*	received by this Authority on	
		a sequence listing and/or any related table(s) – see Suppler	nental Box Relating to Sequence L	isting.
3.		The amendments have resulted in the cancellation of:		
		the description, pages		
		the claims, nos.		
		the drawings, sheets/figs		
		the sequence listing (specify):		
		any table(s) related to sequence listing (specify):		
4.		This report has been established as if (some of) the amen they have been considered to go beyond the disclosure as f		
		the description, pages		
		the claims, nos.		
		the drawings, sheets/figs		
		the sequence listing (specify):		
		any table(s) related to sequence listing (specify):		
*	If ite	em 4 applies, some or all of those sheets may be marked "sup	perseded."	

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		Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
1.	Statement							
	Novelty	(N) Claims 1-15	YES					
		Claims	NO					
	Inventiv	e step (IS) Claims 1-15	YES					
		Claims						
	Industria	al applicability (IA) $_{ m Claims}$ 1–15	•===					
	11104054110	Claims 1 applicability (IA) Claims 1-15						
2.		d explanations (Rule 70.7)						
1. Amendments:								
		The new claim 1 corresponds to a combination of						
		the originally filed claims 1 and 8.						
		This amendment thus meets the requirements of PCT						
		Article 34(2)(b).						
	2.	Disclosures						
	D1:	US-A-4 148 204 (DOTZER RICHARD ET AL) 10 April						
		1979 (1979-04-10)						
	D2:	US-A-4 236 940 (MANTY ET AL) 2 December 1980						
		(1980-12-02)						
	D3:	EP-A-0 184 985 (ELTECH SYSTEMS CORPORATION) 18						
		June 1986 (1986-06-18)						
	D4:	US-A-3 560 274 (HORACE R. OGDEN) 2 February 1971						
		(1971-02-02)						
	D5:	WO 99/38642 A (CLAD METALS LLC; GROLL, WILLIAM, A)						
		5 August 1999						
	D6:	EP-A-0 289 432 (CEGEDUR SOCIETE DE TRANSFORMATION						
		DE L'ALUMINIUM PECHINEY) 2 November 1988 (1988-11-						
		02)						
	D7:	DE 36 22 032 A1 (FERDINAND MENRAD GMBH & CO KG) 21						

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
	January 1988					
D8:	US-A-3 755 090 (JACKSON A, GB ET AL) 28 August					
	1973 (1973-08-28)					
D9:	US-A-5 196 075 (JANSEN ET AL) 23 March 1993 (1993-					
	03-23)					
D10:	US-A-4 655 884 (HILLS ET AL) 7 April 1987 (1987-					
	04-07)					
D11:	US-A-5 679 181 (OHMURA ET AL) 21 October 1997					
	(1997-10-21)					
D12:	GB-A-2 188 942 (ROLLS-ROYCE PLC) 14 October 1987					
	(1987-10-14)					
D13:	US-A-3 957 594 (GRELLET ET AL) 18 Mai 1976 (1976-					
	05-18)					
D14:	US-A-2 044 742 (ARMSTRONG PERCY A. E. ET AL) 16					
	June 1936					
2.1	Document D1 discloses a process for producing coated workpieces comprising the following steps:					
	galvanic deposition of Al, Cd, In or Zn, i.e. no					
	alloys, and thermal treatment.					
2.2	Documents D2 and D4 disclose processes for					
	producing coated titanium or titanium alloy					
	workpieces comprising the following steps:					
	galvanic deposition of chromium, i.e. no alloys,					
	and thermal treatment.					
2.3	cument D3 discloses a process for producing					
	coated nickel, cobalt and/or iron workpieces					
	comprising the following steps: galvanic					
	deposition of a titanium-aluminium alloy, and					
	thermal treatment.					

citations and explanations supporting such statement

alloys, and thermal treatment.

2.4 Document D5 discloses a process for producing coated copper, steel, aluminium or titanium workpieces comprising the following steps: galvanic deposition of pure aluminium, i.e. no

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;

- 2.5 Document D6 discloses a process for producing coated aluminium workpieces comprising the following steps: galvanic deposition of nickel, i.e. no alloys, and thermal treatment.
- 2.6 Document D7 discloses a process for producing coated titanium, titanium alloy or niobium workpieces comprising the following steps: galvanic deposition of nickel, i.e. no alloys, and thermal treatment.
- 2.7 Documents D8-D14 do not describe the application of an aluminium-magnesium and/or aluminium-tin alloy to a substrate, and should therefore not be considered relevant.

3. Novelty:

Box No. V

3.1 The subject matter of claim 1 is novel under PCT Article 33(1) and 33(2) over the disclosures of D1-D14 because none of the citations discloses a process for producing workpieces with galvanic deposition of an aluminium-tin and/or aluminium-magnesium alloy, as in claim 1.

citations and explanations supporting such statement								
3.2	Dependent	claims	2-13	should	also	be	considered	
	novel.							

3.3 The workpieces as per claims 14 and 15, which are produced by the process as per claim 1, should also be considered novel.

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;

4. Inventive step

Box No. V

4.1 Document D1, which is considered to represent the closest prior art, discloses (cf. 1.1) a production process from which the subject matter of claim 1 differs in that an aluminium-tin and/or aluminium-magnesium alloy is galvanically deposited.

The present invention can therefore be considered to address the problem of producing workpieces by a process which achieves higher long-term resistance to thermal stresses, i.e. higher thermal stability against oxidation, in particular in a range from 750°C to 1000°C (paragraph 39 of the application).

These galvanically applied aluminium alloys, which are diffused into the (titanium) substrate, have hitherto not been considered, and the problem could thus not be successfully solved.

For this reason, the subject matter of claim 1 is considered inventive under PCT Article 33(1) and 33(3).

citations and explanations supporting such statement

Box No. V

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4.2 The subject matter of dependent claims 2-13 should also be considered inventive.

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;

4.3 The workpiece as per claims 14 and 15, produced by this process, is also considered inventive because it exhibits hitherto unattainable properties, including outstanding long-term resistance to thermal stresses, i.e. resistance to oxidation and other corrosive, high-temperature influences.

5. Additional observations:

The description, in particular pages 4 and 5, should be brought into line with the new claims.